

REMARKS

Prior to entry of this amendment, claims 1-38 were pending in the subject application.

Claims 1 and 18 are independent.

Applicants appreciate the Examiner's consideration of applicants' Information Disclosure Statement filed December 21, 2005.

By this amendment, claims 1 and 2 are amended solely to more particularly recite features of subject matter previously recited in claims 1 and 2. No new matter is added. Support for the amendments to claims 1 and 2 may be at least found in FIG. 3E of applicants' originally filed specification.

Claims 1-38 are presented to the Examiner, of which claims 18-38 have been identified as being allowable. Claims 1 and 18 are independent.

A. Introduction

In the outstanding Office Action Made Final, the Examiner objected to claim 1 because of awkward language; rejected claims 1-17 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement; rejected claims 1-9 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,411,086 to Choi et al. ("the Choi et al. reference"); rejected claims 10-17 under 35 U.S.C. § 103(a) as being unpatentable over the Choi et al. reference in view of U.S. Patent No. 6,690,164 to Fedeli et al. ("the Fedeli reference"); and allowed claims 18-38.

B. Objection to Claim 1

In the outstanding Office Action Made Final, the Examiner objected to claim 1 because of awkward language. Applicants amended claim 1 to recite "pick-up coil" instead of "pick-coil" responsive to the objection. It is respectfully requested that the objection be withdrawn.

C. Asserted Rejection of Claims 1-17 due to Written Description Requirement

In the outstanding Office Action Made Final, the Examiner rejected claims 1-17 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Applicants amended claim 1 to recite “along a direction substantially perpendicular to the semiconductor substrate, overlapping portions of the pick-up coil overlapping with and sandwiching overlapping portions of the excitation coil and a portion of the soft magnetic core extending substantially parallel to the semiconductor substrate between the overlapping portions of the excitation coil and the pick-up coil” responsive to the rejection. Applicants submit that support for the features recited in current claim 1 may be at least found in FIG. 3E of applicants’ originally filed specification. It is respectfully requested that the rejection be withdrawn.

D. Asserted Anticipation Rejection of Claims 1-9

In the outstanding Office Action Made Final, the Examiner rejected claims 1-9 under 35 U.S.C. § 102(e) as being anticipated by the Choi et al. reference. The rejection is respectfully traversed for at least the following reasons.

Claim 1 now recites, in part:

along a direction substantially perpendicular to the semiconductor substrate, overlapping portions of the pick-up coil overlapping with and sandwiching overlapping portions of the excitation coil and a portion of the soft magnetic core extending substantially parallel to the semiconductor substrate between the overlapping portions of the excitation coil and the pick-up coil.

In the Choi et al. reference, as illustrated in FIG. 2, the excitation coil 14a-14b and the magnetic flux variation detecting coil 15a-15b are alternately wound around the semiconductor substrate 11. In FIG. 5 of the Choi et al. reference, a portion of the bottom layer wire labeled with reference numeral 24, and a portion of the middle layer wire labeled with reference numeral 28 may correspond to portions of the excitation coil 14a-14b, and a portion of the top layer wire,

drawn as a white box directly above the portions of the bottom layer wire and the middle layer wire respectively labeled with reference numerals 24 and 28, may correspond to a portion of the magnetic flux variation detecting coil 15a-15b. However, as illustrated in FIGS. 2 and 5 of the Choi et al. reference, no portion of the magnetic flux detecting coil 15a-15b overlaps another portion of the magnetic flux detecting coil 15a-15b. For at least these reasons, no portion of the magnetic flux detecting coil 15a-15b of the Choi et al. reference sandwiches overlapping portions of the excitation coil with a portion of the soft magnetic core extending between the overlapping portions of the excitation coil and the pick-up coil.

For at least these reasons, applicants submit that the Choi et al. reference fails to disclose or suggest all the features of independent claim 1, as well as all the features of claims 2-9, which directly or indirectly depend from claim 1. It is respectfully requested that the rejection be withdrawn.

E. Asserted Obviousness Rejection of Claims 10-17

In the outstanding Office Action Made Final, the Examiner rejected claims 10-17 under 35 U.S.C. §103(a) as being unpatentable over the Choi et al. reference in view of the Fedeli et al. reference. The rejection is respectfully traversed for at least the following reasons.

As discussed above, the Choi et al. reference fails to disclose or suggest all the features of independent claim 1, from which claims 10-17 directly or indirectly depend. Applicants submit that the Fedeli et al. reference fails to overcome the deficiencies of the Choi et al. reference, as applied to claim 1.

As illustrated in FIG. 2 of the Fedeli et al. reference, the ferromagnetic core 26 may extend perpendicular to the substrate 20 (col. 3, lines 25-29) with the excitation coil 24 extending along a first plane parallel to the substrate 20 and the pick-up coil 22 extending along a second

plane parallel to the substrate 20. No portion of the pick-up coil 22 overlaps with another portion of the pick-up coil 22 so as to overlap with and sandwiching overlapping portions of an excitation coil and a portion of a soft magnetic core extending substantially parallel to the substrate 20 between the overlapping portions of the excitation coil and the pick-up coil.

For at least these reasons, applicants submit that the combination of the Choi et al. reference and the Fedeli et al. reference fails to disclose or suggest all the features of independent claim 1, and accordingly, all the features of dependent claims 10-17, which directly or indirectly depend from claim 1. It is respectfully requested that the rejection be withdrawn.

F. Allowed Claims

Applicants appreciate the Examiner's allowance of claims 18-38. For at least the reasons discussed above, applicants submit that all pending claims are allowable.

G. Request Entry of Amendment

Applicants respectfully request that this amendment be entered at least because the amendment: (1) only amends independent claim 1 and dependent claim 2 to more particularly recite features of subject matter previously included in claims 1 and 2, and thus, merely amplifies issues previously addressed and does not raise any new issues requiring further search and/or consideration; (2) does not add any new claims; (3) is made responsive to the June 7, 2006 Office action; and (4) places the claims in better form for an appeal. Entry of the amendment is respectfully requested.

H. Conclusion


If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments and remarks, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.

Respectfully submitted,

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PETITION and
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying-papers may also be charged to Deposit Account No. 50-1645.